More on data processing with the ‘Carl differentiator’ (CD)

I include 5 files. I use the parameters 20 pre samples, and 10 post samples in all of the plots shown. In general, that data looks much cleaner (fewer stray signals above threshold) after applying the CD.

The first pcpc.ps, shows mountain plots of views with tracks with and without applying the CD. This data shows more detail than the previous plots I put in the data base in that all of the wires are included. The first two plots are before, and the second after, the CD is applied.

The next several plots show the effect on resolution. There is data from two runs (97 and 121) so that data from all the planes is represented. The titles show the run number and when CD has been applied. For all of the data, the cleanliness cut has been applied, (requires an average of less than 2.5 hits per hit wire). This cut improves the apparent resolution by of order 10%.
It is interesting that the CD clearly improves the resolution for some time constant/plane combinations, but not all.